

What is claimed is:

1. A method for analyzing a sample by employing a Fast Fourier Transformation method, comprising:
generating an image of a region of the sample to be analyzed;
generating data having a frequency from the image by the Fast Fourier Transformation method; and
analyzing the generated data to determine whether the region is normal or abnormal.
2. The method for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 1, wherein the region includes a periodically formed pattern.
3. The method for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 1, wherein the region is formed on a semiconductor substrate and corresponds to a cell region including a periodic pattern.
4. The method for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 3, wherein the periodic pattern has a line width and is formed by an etching process.

5. The method for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 1, wherein the image is generated by a scanning electron microscope.

6. The method for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 1, further comprising defining the image into at least two pixel units.

7. The method for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 1, further comprising providing an alarm when the region is abnormal.

8. A method for analyzing a sample by employing a Fast Fourier Transformation method, comprising:

generating a magnified image of a minute pattern formed in a cell region of a semiconductor substrate;

measuring a line width of the minute pattern using the magnified image;

generating data having a frequency from the image by the Fast Fourier Transformation method; and

analyzing the generated data to determine whether the minute pattern is normal or abnormal.

9. An apparatus for analyzing a sample by employing a Fast Fourier Transformation method, comprising:

- an image generation part for generating an image of a region of the sample to be analyzed;
- a data generation part for generating data having a frequency from the image by the Fast Fourier Transformation method; and
- a data discrimination part for analyzing the generated data to determine whether the region is normal or abnormal.

10. The apparatus for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 9, wherein the image generation part includes a scanning electron microscope.

11. The apparatus for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 9, further comprising a display part for displaying the generated data.

12. The apparatus for analyzing a sample by employing a Fast Fourier Transformation method as claimed in claim 9, further comprising an alarm part for providing an alarm when the region is abnormal.

13. An apparatus for analyzing a sample by employing a Fast Fourier Transformation method, comprising:

a scanning electron microscope for generating a magnified image of a minute pattern formed in a cell region of a semiconductor substrate;

a line width measurement part for measuring a line width of the minute pattern using the magnified image;

a data generation part for generating data having a frequency from the magnified image by the Fast Fourier Transformation method; and

a data discrimination part for analyzing the generated data to determine whether the minute pattern is normal or abnormal.